INSTITUTE OF DEVELOPING ECONOMIES

IDE Discussion Papers are preliminary materials circulated
to stimulate discussions and critical comments

IDE DISCUSSION PAPER No. 206

Issues Affecting the Movement of Rural Labour in Myanmar: Rakhine Case Study

Ikuko Okamoto*

July 2009

Abstract
This paper presents issues affecting the movement of rural labour in Myanmar, by examining the background, purpose and earned income of labourers migrating to fishing villages in southern Rakhine. A broad range of socioeconomic classes, from poor to rich, farmers to fishermen, is migrating from broader areas to specific labour-intensive fishing subsectors, such as anchovy fishing. These labourers are a mixed group of people whose motives lie either in supplementing their household income or accumulating capital for further expansion of their economic activities. The concentration of migrating labourers with different objectives in this particular unstable, unskilled employment opportunity suggests an insufficiently developed domestic labour market in rural Myanmar. There is a pressing need to create stable labour-intensive industries to meet this demand.

Keywords: migration, labour, fishery
JEL classification: J61, R23

*Overseas Research Fellow, IDE (ida@ide.go.jp)

The Institute of Developing Economies (IDE) is a semigovernmental, nonpartisan, nonprofit research institute, founded in 1958. The Institute merged with the Japan External Trade Organization (JETRO) on July 1, 1998. The Institute conducts basic and comprehensive studies on economic and related affairs in all developing countries and regions, including Asia, the Middle East, Africa, Latin America, Oceania, and Eastern Europe.

The views expressed in this publication are those of the author(s). Publication does not imply endorsement by the Institute of Developing Economies of any of the views expressed within.

INSTITUTE OF DEVELOPING ECONOMIES (IDE), JETRO

3-2-2, WAKABA, MIHAMA-KU, CHIBA-SHI

CHIBA 261-8545, JAPAN

©2009 by Institute of Developing Economies, JETRO
No part of this publication may be reproduced without the prior permission of the IDE-JETRO.

Introduction

There is no significant rural-urban migration in Myanmar.[1] This is mainly because full-scale industrialization was not implemented during the 25 years of socialist regime or even after the 20 years of economic transition. The country's economic structure has barely changed over the past 45 years and the capacity of the urban sector (industry as well as service) to absorb labour remains inadequate.

Nevertheless, the limited rural-urban migration does not signify that rural Myanmar is static with no population movement. We consider the following two population flows as being prominent since the start of economic transition in the late 1980s.

One is overseas migration, which is rapidly increasing. The number of Myanmar migrants working on fishing boats, in factories, and at construction sites in Thailand has increased dramatically since around the mid-1990s (Bradford and Vicary 2005). Many Myanmar labourers are also working at ports and in factories in Malaysia. Even though the majority are fully aware of the severe working conditions in the destination countries, there is no end to the people who wish to migrate and are willing to pay exorbitant fees[2] to migration brokers.

The other population flow is intrarural migration. Previous research on domestic migration from an economic standpoint is limited, with the exception of a study by Takahashi (1997). Takahashi conducted a field survey in 1993-95 and found that 20% of the village population had been replaced. The following two characteristics of their movement were found in his study. First, the major class of people migrating were non-farmers, especially agricultural labourers who do not own any farmland or other assets. As pointed out in many studies, there is

[1] Nang Mya Kay Khaing and Fujita (2009) found that those engaged in the informal sector in Yangon, the former capital, were not necessarily from villages, but rather from towns in the rural area.

[2] For example, the cost of migration from Chin State to Malaysia was equal to about one or two times the annual agricultural income, according to Takahashi (2007, 419).

a large pool of agricultural labourers in rural Myanmar (Saito 1986; Takahashi 1992, 2000; Fujita 2009; Okamoto 2008a), and they constitute the floating population. Second, there is not much change in their occupation before and after the move. For example, agricultural seasonal labourers tend to also engage in seasonal labour in the new place. Furthermore, the destination area was mostly confined to within the same township in which they used to live.[3] In other words, the migrants' reason for moving is not necessarily to gain a larger income under a completely different economic environment. In this sense, the move cannot contribute much to increasing the total household income. What is more important here is stability of livelihood, or the minimization of household income fluctuation throughout the year.

Takahashi's field survey was conducted during the initial phase of Myanmar's economic transition. Even though industrialization has not progressed very far since then, the movement of goods, people and capital has been brisk. In line with the increase in overseas migration, it is highly likely that intrarural migration is also increasing – in scale as well as in area covered. However, due to the absence of sufficient and reliable statistics for grasping and analyzing the whole picture of domestic labour movement, it is necessary to accumulate evidence from case studies.

To shed light on the issues affecting the movement of rural labour, this study adopted an empirical approach based on the case of labourers (crewmen) migrating to fishery villages in Rakhine State. Rakhine is generally regarded as a remote state, bordering Bangladesh. However, on the side facing the Gulf of Bengal is a newly developed area for Myanmar's commercial fisheries, along with those of the Tanintharyi Division. In particular, Thandwe District in southern Rakhine has shown remarkable development as a base for export-oriented shrimp fishing (both small-scale trawling and gill net) since the latter half of the 1990s (Okamoto 2008 b). However, as competition among shrimp fishing intensified, shrimp resources started

[3] The administration units of Myanmar are State and Division, District, Township and Village tract.

decreasing and subsequently, the fishermen's catch also declined in recent years. Along with the declining shrimp catch, many fishermen turned to anchovy (*nganitu*) purse seine fishing. Unlike shrimp fishing, purse seine fishing is labour intensive, requiring a crew of 25–30 men for each set of boats. Since local labourers alone could not meet this demand, many labourers began migrating to the area seeking employment for the anchovy fishing season. To the best of our knowledge, such large-scale domestic labour migration has never been reported and thus deserves scrutinizing.

Given the limited capacity for labour absorption by the urban and industrial sectors, and the fact that overseas migration is not widely available due to the high transaction cost and risk,[4] this type of labour-intensive industry in a remote area would be highly significant in terms of improved livelihood for rural households. Thus, this paper hopes to clarify the following three points based on individual interviews with the migrating crewmen. First, who are the migrating labourers? Second, what are their major reasons for migrating? Third, to what extent has migration improved the economic standard of their household? By analyzing the responses to these questions, we attempt to highlight the issues related to Myanmar's labour market in the mid-2000s, and provide a basis for further research.

The following sections analyze the research questions, while keeping in mind the findings described above. The first section presents an overview of the survey area and general conditions of the fishing industry as well as of purse seine fishing carried out in the area. The second section clarifies the characteristics of the migrating labourers, followed by an analysis of their background and the reasons for migrating in the third section. The last section presents our conclusions.

[4] In some cases, migrant workers were arrested and sent back to Myanmar without any money (Takahashi 2007).

I. Anchovy Purse Seine Fishing in Rakhine State

1. Overview of study area

Thandwe Township is a major fishing base in southern Rakhine State. During the socialist period, the township was the landing base for the state-owned Fishery Enterprises, but when liberalization of the fishing industry began in the 1990s, both inshore and off-shore fisheries saw remarkable growth. The main actors of inshore fisheries are the small-scale fishermen in the coastal area (Okamoto 2008b). The shrimp fishing boom opened up the way for development and anchovy purse seine fishing became popular in the early 2000s.

One town and 63 village tracts make up Thandwe Township, with a total population of about 140,000 people. Village J in the M village tract and Village S in the S village were selected as the study site (see Table 1) due to highly active anchovy fishing in both villages and a large number of migrating labourers. The interviews were conducted in February 2008.[5] The reasons for selecting these two villages were that the anchovy purse seine fishing is quite active in these villages and these are the two biggest destinations for the migrating fishing labourers.

Village J is closer to Thandwe Town and has better transport infrastructure compared to Village S, which takes about 30–40 minutes to reach by car (the road to the village is very rough) and 1 hour by boat. There is a big difference between the two villages in terms of geographical convenience.

However, the two villages are equal in terms of being highly dependent on the fishery. Even though Village J has other employment opportunities besides fishing due to its close proximity to the town, the hotels near the beach resort, and the processing plants, about 85% of the total households engage in fishing-related industries as the main household occupation.[6] Village S is a genuine fishing village. Some households own farmland, but it is usually a small

[5] Village tracts normally consist of several villages each. M village tract consists of two villages, while the S village tract consists of 5.

[6] Interview with the former chairmen of Village S.

area and is basically for home consumption. Also, since Village S is far from town, non-fishery and non-farm employment opportunities are limited.

The interviews were conducted with fishing labourers (crewmen) who had migrated from other areas. However, the target of analysis was not restricted to the individual crewmen since the decision to migrate is generally made by the entire "household". Thus, an attempt was made to grasp the details about the crewmen and their families. For example, income was estimated not only for each crewman, but also for the household by clarifying the income of each household member.

A total of 107 crewmen were interviewed: 60 in Village J and 47 in Village S. In both villages, a comprehensive list of crewmen from other areas was not available since these labourers are very mobile with varying duration of stay in the village. Thus, it was not possible to randomly select the interviewees. We asked key villagers to select crewmen from different owners' boats, in order to minimise the bias. The main interview questions dealt with family structure, place of origin, motivation for migration, cost of migration, sector-wise income, consumption, and credit situation. The interviews were conducted by several local enumerators using our prepared questionnaires. After each interview, we checked the questionnaire and confirmed any points that were not clear with Burmese language.

2. Development of anchovy purse seine fishing

The season for anchovy purse seine fishing is during the dry months from October to May. The fishing operation is conducted at night; the boats leave the shore at around 5 or 6 o'clock in the evening and return early the next morning. Two boats are required: one to light up the sea and the other to encircle the fish that gather around the lighted water. Considerable labour is required for pulling up the nets, so 25–30 crewmen are generally hired for each set of boats. The landed anchovies are sun dried on the nets spread out on the shore. The drying work is handled

by women hired from the village together with the wives and daughters of the migrating crewmen. The boat owners do not go out to sea with the crew, but instead wait until their boats return to shore. They weigh the landed fish and record the details, and at the same time, they distribute small fish (other than anchovies) to the crewmen for their daily meal.

Purse seine fishing itself is not new to this area; it started around the early 1980s.[7] However, its initial target was small shrimp (sold as a dried product). Anchovies were caught by beach seine fishing at that time.

The use of purse seine (nets) to catch anchovies started around the late 1990s. The original target for purse seine fishing was small shrimp; however, small-scale shrimp trawling started in the area around the same time,[8] dramatically reducing the shrimp catch for purse seine fishing. Thus, the target was changed to anchovies.

In the early years, the fishing ground for small shrimps and anchovies was within 5 nautical miles of the coast, so only small engines (5–6 horsepower) were needed for the boats and fewer crewmen (12–15) were required. They were mostly local villagers as migrating labourers were rare at the time. Eventually, however, these boats started fishing in remote waters (10–20 nautical miles from the coast), most likely due to the decrease in catch near the coast. Accompanying the change in fishing ground was the need for larger boats and engines and a greater number of crewmen to handle the fishing operations.

The number of purse seine fishing boats in Village J increased from 50 sets in the early 1990s to 100 sets in 1998 and 110 sets in 2008. In Village S, the number was 15 in the mid-1990s, increasing to 50 in 2002 and 68 in 2008.[9] The pace of development of purse seine fishing

[7] The start of this type of fishing was earlier in Village J than in Village S.
[8] Small-scale trawling is illegal, but is given silent approval in the field.
[9] The exact change in number of boats is not available. The Department of Fisheries records the number of gear licenses, but these numbers often differ from the figures obtained at the village level.

was slower in Village S than Village J, but both villages have experienced a rapid increase in the number of operating boats in recent years.

II. Migration of Crewmen to the Study Area

How many crewmen in the study villages are from other areas? Suppose that each set of purse seine boats has 25 crewmen. That would mean that 2750 crewmen are needed in Village J and 1775 in Village S. The actual number of crewmen from other areas fluctuates every year, and there is no system in place for keeping an accurate record. According to key villagers, the number of crewmen from other areas accounts for about 60–70% of the total number working in each village. Thus, the number of crewmen from other areas is estimated to be 1600–2000 for Village J and 1000–1200 for Village S.

The duration of stay for crewmen in each village varies widely. In this study, crewmen are categorized as either "short-term" labourers who stay in the village for only a few months of the year specifically for anchovy purse seine fishing, or "long-term" labourers who remain in the village throughout the year. Some of the short-term labourers go back and forth between their place of origin and the study village for several years, while others come to work in the study village only once. Given the fact that the survey year (2007/08) was the first year working in the study village for 45% of the interviewed crewmen, we can assume that there is a high turnover of migrating labourers (see Fig. 2). Table 2 presents the pattern of movement for the crewmen based on the definition above. The share of short-term labourers is only slightly larger than the long-term labourers in Village J and Village S. Thus, there is a mix of short-term and long-term labourers in the area.

Where did these crewmen come from? And, how did they get here? The places of origin of the crewmen are shown in Table 3 and a location map is provided in Fig. 1. The places of origin are widespread: northern, central and southern Rakhine State and even Ayeyarwaddy

Division. Only a small number of crewmen came from Thandwe Township. The origin of migrating labourers was not concentrated in one location.

The majority of labourers decided to migrate to the study villages after hearing from friends or relatives that the area was booming with anchovy purse seine fishing and would provide a high cash income. The first ones who came to the area tried to find an employer (boat owner) by contacting persons who used to work there.[10] In this sense, even though the places of origin were widespread, the labourers were part of a chain migration. The majority of labourers came to the villages to engage in purse seine fishing only for a year as trial. Some came alone and some came with other members of their household (such as brothers). In certain cases, the entire family came along (see Table 4).[11] Then, about 60% of the crewmen returned to their original home after the season (Table 2). Among those who were not obligated to return to their home, some were fortunate enough to find local work for the rainy season. The main opportunities during the rainy season were shrimp fishing and repairing fishing nets. For Village J, hotel construction was also on this list. Shrimp fishing operations did not provide an opportunity for all crewmen of purse seine fishing since only 3 or 4 men were required for each shrimp boat. On the other hand, some crewmen who wanted to go home were forced to remain in the area because they did not have enough money for the trip or for repaying their debt to the boat owner (the reason is explained later). Hence, they engaged in casual labour to make ends meet.

We observed two prominent characteristics of the labourers from other areas. First, their average age was rather young (27.6 years old for Village J and 27.3 for Village S) and they were fairly new entrants into the labour market. Second, they had a relatively high level of education

[10] The exception was crewmen from Ayeyarwaddy. One boat owner moved to the studied village in order to start anchovy fishing. He recruited crewmen from his native area as he preferred to employ Burmese, rather than the Rakhine.

[11] Included here are several crewmen who were single when they moved to the area, but later got married in the surveyed villages.

(see Fig. 3). The dropout rate from middle school (in other words, they have completed primary education at least) was 45%. In a previous survey conducted in various parts of Myanmar, the share of dropouts from middle school was 30% on average, and 15% in the case of non-farmowners (agricultural labourers), which suggests that they stopped going to primary school at some stage (Fujita 2009, 295-300). Compared to these figures, the educational level of the labourers in our study is rather high. For an occupation such as fishing crewman, which is generally categorized as simple but demanding and laborious work, the migrating labourers have an unexpectedly high level of education.

Looking at the places of origin and characteristics of the crewmen described so far, no large difference can be seen between Village J and Village S.[12] Thus, to avoid unnecessary complication, the following analysis will not differentiate between the two villages.

III. Background of Migrating Crewmen and Purpose for Migrating

What is the background of migrating labourers who engage in anchovy purse seine fishing? To clarify this point, the major occupation (largest income source) of the households in local villages is shown in Table 5. It can be seen that the crewmen are from diverse classes that are not directly related to purse seine fishing.

Labourers from farm-related households (self-employed farmers and agricultural labourers) account for the largest share. If the self-employed farm households hold only a small area of land, their situation would not be very different from that of the agricultural labour households. Therefore, we should check the size of the land held by these farm households (Table 6). About 75% of the households hold over 5 acres, indicating that these households are not necessarily small/marginal farmers. Medium and large farmers are also included. Therefore,

[12] The average size of household is almost the same for the two villages (4.9 persons/household for Village J; 4.8 for Village S).

farm-related households sending labourers to the study area are quite diverse, ranging from agricultural labour to large farm households.

There are also labourers from non-farm households such as petty trading, carpenters and public servants. Non-farm sectors such as petty trading generally provide a relatively high income in rural Myanmar, and these households often constitute the upper layer in the village economy (Takahashi 2000, Kurosaki et al. 2004, Okamoto 2008a).

On the other hand, there are fishing households as well, but they are confined to very minor/marginal fishing. The infrastructure in northern Rakhine State is generally poor, and commercial fishing is not well developed there.[13] The fact that only two households own mechanized boats clearly shows that the type of fishing done in the north is quite different from the purse seine fishing conducted in the study area.

Takahashi (1997) found that the occupation of migrant labourers remained constant before and after their move, and that agricultural labour households were the main class of migrating people. On the other hand, the migrant labourers in this study are not only from the very poor class, but also from the rich class, which might be reflected in the high level of education pointed out earlier.

It is important to note that these migrating labourers are generally people who face fewer constraints against moving. Among the interviewed crewmen, only 48 of the 107 were the head of the household (main income earner). The remaining 59 were all sons. Thus, many migrating labourers are the second- or third-generation workforce in the respective households. For example, in the case of farm households (34 households), which may be the most constrained in terms of the necessity to manage their farmland, more than 70% (25 households) sent the sons rather than the head of the household to the study area. In the case of the households where the

[13] There are shrimp aquaculture ponds (extensive type) in the area, but the high start-up cost has been a barrier to new entrants.

household head came to the study area (9 households), farming was not an issue when making the decision to move since they were independent of their farmer fathers (4 households), or they had only a small area of land, which could be left idle and monitored by the remaining family members during the dry season (5 households). Hence, the majority of crewmen came from households with few constraints against moving.

This trend in which the majority of migrating crewmen have fewer constraints against moving can be confirmed by examining the kind of work that these crewmen previously did during the purse seine season (see Table 7). The majority (80%) were engaged in agricultural labour, non-agricultural labour, assisting with their father's farming or fishing operations, attending school, or doing nothing at all.

Then, what was the purpose for migrating to another area? Generally, migration is adopted as a strategy for diversification of income sources. Here, we examine the purpose of diversification in detail. Table 8 shows what the interviewees hoped to do with the income earned as a crewman. Note that this table only shows the crewmen's expectations, and not their actual usage. Nevertheless, since expectations are important in making the decision to migrate, it is useful to confirm the intended purpose of migration.

Judging from the information provided in the table, there are two types of migrating labourers. The first are those who intend to earn a much higher income than they could have earned at home in order to expand their future economic opportunities. Some plan on expanding their main occupation or entering into a new occupation that would provide a higher income than the present one. In Table 8, the purchase of new production assets such as farmland and livestock, acquiring capital for petty trading, carpentry and sawmills are good examples. These labourers have positioned anchovy purse seine fishing as a step towards upgrading their living standard. For example, among those who intend to purchase farmland (31 crewmen), those from agricultural labour households account for the highest share (19), followed by self-employed

farm households (7). By engaging in anchovy fishing, agricultural labourers stand a chance of one day owning land and climbing up the economic ladder, while self-employed farmers count on expanding their farm acreage. Obtaining the capital to start petty trading can be interpreted in a similar way. Like running a grocery store or brokering agricultural/fishery products, petty trade provides a relatively high and stable income in rural Myanmar, and many of the crewmen hoped to accumulate sufficient capital to start a business (21).

The second type are those who intend to minimize the income fluctuation throughout the year. Some plan on using the fishing income for consumption (8), house construction and maintenance, education and medication. Those who plan on using the money to supplement the working capital for farming or fishing are also included here. Myanmar has a typically underdeveloped financial market that cannot be depended upon to raise working capital for farming and fishing for home consumption. Therefore, people need to raise their own capital through the labour market (i.e., migration). In some cases, even though the original intention is to expand their economic activities, crewmen end up sending the money to their families for home consumption (see Table 9).

Hart (1994, 48) analyzed the correlation between the income diversification strategy of the household and the land holding size, and pointed out that the purpose of diversification differs accordingly. Large farmers “diversify to accumulate”, while small farmers “diversify to survive”. The same two purposes can also be found for the migration of labourers to anchovy purse seine fishing.

The fact that labourers who differ in their purpose are pouring into the same employment opportunity, i.e., as crewmen engaged in anchovy purse seine fishing, signifies the absence of local opportunities for achieving either of the two goals.

The next section examines whether or not the crewmen earn sufficient income to meet their expectations or achieve their goals.

IV. Impact of Crewman Earnings on Household Income

Crewmen receive their reward from anchovy fishing based on the rule of sharing the catch between the owner and the crew. In the survey year (2007/08), the common practice was for the owner and the crew to take an equal share (i.e., 50% each) of the value of the daily catch. The share for the crew was divided equally among all the crewmen. As for the cost of fishing, a third of the fuel cost (diesel oil) is borne by the boat owner, but the rest (including engine oil and lamps used for lighting the water) is borne by the crewmen. Up until a few years ago, the crew had to bear the fuel cost.[14] However, due to the increase in fuel cost in recent years, very little cash was left for the crewmen and they soon lost their motivation to work. Therefore, the owners decided to bear part of the fuel cost.[15]

Among the crewmen, the first and second leaders can receive 10% and 5%, respectively, from the owner's share. In the case of anchovy purse seine fishing, since the owner does not go out to sea with the crew, the leaders take responsibility for monitoring and controlling the other crewmen on the boat. The leaders are usually villagers rather than migrating labourers, due to the uncertain duration of stay of the migrants. This does not mean that migrating crewmen can never be leaders; it is possible if they stay in the area for a long period and gain sufficient experience. At the time of our interviews, there were no leaders among the interviewed crewmen. Therefore, the income for the interviewed crewmen was estimated by deducting the cost from the crew's share.

For optimum accuracy, income estimates should be made based on each interview, but we had to abandon this approach, mainly because the cash received by each crewman was not

[14] As noted earlier, the owners of anchovy fishing boats do not go out to sea with the crewmen. Therefore, there is always a possibility of inappropriate fuel use (i.e., consuming more than the necessary amount). Therefore, the owners preferred that the crewmen bear the fuel cost in order to reduce the monitoring cost.

[15] Interview with boat owners in Village J (November 2007).

always the actual total income earned. In anchovy purse seine fishing, the reward given to the crewmen is normally settled every month. However, before the payment date, crewmen may have asked the owner for rice or cash, and this amount is deducted from the monthly payment (if that particular month suffered from a low catch, the advance payment could be larger than the reward). In addition, since the reward depends on the catch, the monthly income fluctuates widely. Therefore, it is very difficult to estimate the exact income for each individual.

As a second-best approach, we considered the standard daily wage (2000 kyat[16] per day) as the average reward for crewmen. Owners occasionally hire crewmen on a daily basis, to substitute for anyone unable to go out to sea because of illness or other reasons. The daily wages paid to these outside crewmen could well be determined based on the average catch and price. A daily wage of 2000 kyat is quite high considering that the average daily wage for agricultural work in the home villages of the crewmen ranged from 500 to 1000 kyat per day. The income is estimated using this wage, assuming that crewmen work 24 days per month for 6 months. An additional fee covering the fish for personal consumption (average value is 400 kyat per day) is also added here. Then, the yearly income for crewmen would be about 350,000 kyat. What is the economic significance of this amount?

Table 10 exhibits the estimated household income, excluding the crewman earnings. The household income is the total amount from all sources (self-employed farming, agricultural labour, fishery income, non-farm and non-fishery income, etc.). About half the households earn less than 500,000 kyat. Crewman income of about 350,000 kyat is nearly 50% of the household income. Judging from these figures, the contribution of crewman earnings is significant for low-income households.

[16] The season for anchovy purse seine fishing is from October to May of the following year (8 months). However, the catch is usually low at both the start and the end of the season. Also, those who come from other areas tend to arrive late and leave early (before the Burmese New Year). Therefore, their working period is taken as 6 months in the calculation here.

To explain the impact of crewman earnings on the household income, the actual usage of the earnings must be clarified. However, due to the limitations of the survey conducted at the migration destination (for example, crewmen could not grasp the actual usage of the money until after they returned home, or since it was the first year engaged in anchovy fishing for more than half the crewmen, they did not know how much they would earn), it was not practically feasible to collect comprehensive data on actual usage. Therefore, as a second-best approach again, we consider the significance of 350,000 kyat from various aspects.

First of all, is this level of income sufficiently "high" compared to the crewmen's expectations? For those who had left their home several years earlier, it does not make sense to compare the income between the two different places, given the country's high inflation rate. Therefore, we compare the income at home with the income at the study area during the anchovy purse seine season (October to May) for crewmen who arrived at the study villages within the survey year or one year earlier.[17]

As with the previous table, Table 11 shows the correlation between the household income excluding crewman earnings and the income earned at home during the dry season. More than 90%, including those who did not have any occupation (including those under the working age), earned less than 350,000 kyat. Those earning less than 200,000 kyat account for about 80%. In other words, if we take 350,000 kyat as the earnings from anchovy purse seine fishing, about half the samples earn less than half that amount. Therefore, if the crewmen are redundant labourers at home, there is no doubt that crewman earnings are highly attractive as extra income. Even if this is not the case, purse seine fishing provides migrating labourers with sufficiently good income for the dry season.

[17] The total number of respondents was 73, because those who arrived and settled in the area more than 3 years earlier and those who were unable to respond clearly were excluded from this analysis. Crewmen who received wages in kind were added to the analysis even if they had arrived more than three years earlier, as their income could be estimated using average paddy prices in the village.

However, if the cost for moving from home to the study area is too high, the motivation to migrate would decrease even if there is a big difference in expected income between the two places. As the average transfer cost is about 20,000 kyat per person, some labourers sell their assets or take out loans, but the majority (76%) use their savings or borrow from their parents. The cost of living in the study villages is negligible. The majority of crewmen live in small, shabby huts prepared by the owner or the village. As long as they work on the fishing boats, they do not have to pay rent for the huts.[18] Therefore, the overall cost for transferring is not large.

So, what can be purchased with 350,000 kyat? We take rice as an example since it accounts for the largest share of household expenditures in Myanmar. According to the results of an official household expenditure survey, monthly per capita rice consumption for rural Rakhine State is 8.6 pyi[19] (CSO 1999, 185). The average retail price for rice was 700 kyat per pyi at the time of the survey, and the average number of family members was 4.8 per household. Based on this information, the yearly rice expenditure per household is calculated to be about 350,000 kyat. This means that the crewman earnings are almost equal to the average expenditure for rice for a year.[20]

What if the 350,000 kyat were spent on assets such as farmland? How many acres could be bought? The price of farmland depends on the area and quality of the land, but it was generally between 200,000 and 400,000 kyat per acre in the home villages of the migrating crews.[21] Therefore, approximately one acre can be bought with 350,000 kyat.

[18] Some of the crewmen who had worked in the area for a number of years and had their family with them lived in more solid houses.
[19] A pyi equals 2.19 kg.
[20] The expenditure for edible oil accounts for the second largest share following rice. Crewmen eat fish supplied by the owners every morning, and they eat meat once a month at most.
[21] Legally, the state owns the farmland and farmers only hold the tillage rights. Buying and selling is prohibited, but there are frequent informal transactions for tillage rights.

Crewman earnings are a big supplement to the livelihood of households who have sufficient income. For example, relatively well-off farm households can use the crewman earnings to purchase an additional acre of land every year. However, in the case of poor households whose income is highly dependent on crewman earnings, the story is somewhat different. They do not expect economic surplus other than for subsistence. Some migrating labourers from low-income households hoped to save money for new economic activities as well (Table 10), but achieving such a goal seems very difficult.

The discussion thus far was based on the assumption that the average earnings for a crewman were 2000 kyat per day. However, the actual rewards fluctuate widely according to the size of the catch. The scale of fluctuation is not compatible to that of farming.[22] This is due to the many diverse factors leading to large income fluctuations in fishing compared to that in farming. In the case of anchovy purse seine fishing, earnings fluctuate according to the catch from each boat, the number of crewmen (ranging from 23 to 30) and the seasonal and annual fluctuation in fish resources.

As mentioned earlier, most of the fishing boats suffered from an unusually low catch of anchovies in the survey year.[23] Consequently, many boats left the normal fishing ground for more remote waters. The low catch also resulted in payment being made to the crewmen only after three months into the season, even though it was supposed to be every month. There were even some crewmen who still had not received payment at the time of the survey. (In these cases, crewmen survive by receiving cash or rice as advance payment.) Some crewmen were so frustrated over the situation that they left in the middle of the season without repaying their debt to the boat owner (i.e., advance payment) in the middle of the season.[24]

[22] Refer to Okamoto (2008b) for the large fluctuation of income from prawn fishing in the study area.
[23] The reason for the low catch is not clear. It may have been due to changes in the sea current or the increase in catch in recent years.
[24] The owner would receive damages equivalent to the advanced wages. One boat owner said that 10

There was a contrasting case as well. A boat from Village S had a lucky day's catch that was equivalent to 10 million kyat from one trip.[25] This amount is comparable to one-third of the average seasonal income for one set of anchovy purse seine boats, according to our estimates (Okamoto 2008b, Annex table). Therefore, the crewmen on that particular fishing boat received the equivalent to two months of earnings. This may be an extreme case, but it demonstrates how the fluctuation in income can be quite large.

As an example, let us assume that the daily wage is 1000 kyat, which is half of 2000 kyat. After adding the value of the fish provided for personal consumption, the seasonal income totals about 220,000 kyat. There were more than 20 crewmen who earned only 1000 kyat per day among those who responded to the survey question on daily earnings; thus it is very likely that there were more crewmen whose actual earnings were only at this level. If this is the case, many of the crewmen earned no more than what they would have earned at home.

This may be especially true for the survey year. A number of crewmen appeared to earn less than what they had expected. This was clearly demonstrated by those who ran away in the middle of the season, and those who had a rather negative attitude about returning to work the following season (16 crewmen said that they would not be returning, and 7 responded that they would make their decision depending on the outcome of the present season).[26] Some crewmen could not return to their home village because they did not have enough money for the trip or for repaying their advance wages to the owner, and thus were forced to continue working. Of course, there was always the chance of following in the footsteps of the fortunate crewmen who had caught the bumper catch. It is not possible for crewmen to foresee the annual fluctuation in

---

crewmen had run away at the time of the survey.

[25] Interview with the previous chairman of Village S.

[26] Some of the reasons pointed out by the interviewed crewmen were "No matter where it is, casual labour is casual labour", "Farming is better", "I can make ends meet working at home".

catch or determine which boats will have the biggest catch. In this sense, anchovy purse seine fishing is regarded as a very unstable employment opportunity.

Conclusion

This paper attempted to point out the characteristics and economic outcome of migrating labourers (crewmen) in two fishing villages in Rakhine State in order to highlight the issues affecting the current intrarural movement in Myanmar. In a survey conducted in the mid-1990s, the floating class in rural areas, namely agricultural labourers, moved within the same township for the purpose of minimizing annual income fluctuation. On the other hand, the case of the crewmen in this study showed a more dynamic labour movement, even in the peripheral area of Myanmar. The characteristics of this labour movement are summarized as follows.

Labourers are migrating from remote areas, especially from northern Rakhine State. They are from diverse economic classes, which are not necessarily associated with fishery. Not only the floating class that has less constraints against moving, such as agricultural and casual labourers, but also those from households with medium and large farms are migrating to the area to work as crewmen. In the case of those coming from relatively affluent households, redundant male labourers tend to migrate alone.

The diversity of economic class of migrating labourers is also reflected in the existence of two different motivations for migration. One is capital accumulation. There were labourers who expected a higher income than what would have been earned at home and who intended to further expand their income earning opportunities. The other class of labourers mainly intended to smooth their annual household income. These were the labourers who had a difficult time finding employment during the dry season. Two types of crewmen coexisted here, namely those who diversified their income sources for the purpose of accumulation and those who diversified their income in order to survive.

The average income level of the crewmen was generally higher than what they could have earned at home during that specific time of the year. However, the earned income was only enough to meet the cost of rice for a year. In this sense, for low-income households that were highly dependent on the crewman earnings, migration did not necessarily promise any capital accumulation compared to their expectations. Furthermore, the income fluctuated widely because of the specific nature of fishing, which is highly influenced by uncontrollable factors such as the weather or the conditions of the fishing ground.

Three points can be drawn from the above findings. First, unlike the period just after the start of Myanmar's economic transition, the dominant objective for migration was not annual income smoothing, but rather to gain a much higher income than what could be achieved at the present rate of increase, even within the (remote) rural areas of Myanmar.

In this process, the economic disparity within the areas of origin of these labourers is likely to expand. In other words, the disparity between those who successfully accumulate capital to expand their economic opportunities (classes that are relatively affluent and have redundant labourers within their households) and those who have yet to focus on maintaining a subsistence level or those who did not migrate from their village, is expected to increase (the gap between the latter two would not be large, as both are mainly focused on survival). As in the case of overseas migration (i.e., to Malaysia), the disparity would increase in terms of asset accumulation as well as living standard between those who succeed and those who do not succeed in intrarural migration.

The second point is the emergence of regional economic disparity in Myanmar. The case of Rakhine State is a clear example. There is a large flow of people from northern Rakhine to southern Rakhine. This can be simply interpreted as that there are fewer economic opportunities in the north than in the south. The southern part of Rakhine was quick to respond to the emerging opportunities for fishery development, while commercial fishery is limited to a small

scale in the north. Behind this is the lagging development of basic infrastructure, resulting in less external economic stimulus reaching the area. If some of the people who have accumulated sufficient capital return home and contribute to activating the local economy, the regional economic disparity would surely be reduced. However, the reality is that the number of migrating labourers has increased year by year over the last decade. Thus, the regional economic disparity could widen further depending on how successfully each area grasps the opening of the market economy, no matter how small it is in comparison to the experience of neighbouring countries.

Lastly, the study findings suggest that even after 20 years of economic transition, the Myanmar labour market has not developed sufficiently to meet either the purpose of income smoothing or capital accumulation for these rural households. Once again, anchovy purse seine fishing is a very unstable and simple employment opportunity, but each year it attracts almost 2000 labourers of diverse economic and social background. This fact clearly shows that there are no alternative employment opportunities for these migrating labourers. Attractive, stable and wide-ranging employment opportunities are not available either to those targeting capital accumulation or those only hoping to survive. This is the main reason for the concentration of migrant workers with different objectives in such an unstable employment opportunity.

What this suggests is the urgent need to create labour-intensive industries. Otherwise, more of the rural (and probably urban as well) population will seek high-cost, high-risk opportunities overseas if they think they can afford it. Not having the capacity to properly utilize its domestic labour force is certainly undesirable for Myanmar, which requires industrialization for mid- and long-term economic development, as the histories of other neighbouring Asian countries suggest.

References

Bradford and Vicary A.2005. “Preliminary Survey Results about Burmese Migrant Workers in Thailand: State /Division of Origin, Years of Entry, Minimum Wage, and Work Permit” *Burma Economic Watch*. Issue 1, 2005: 3-25.

Central Statistical Organaization (CSO). 1999. *Report of 1997 Household Income and Expenditure Survey*. Yangon, Myanmar.

Ellis, Frank. 2000. *Rural Livelihoods and Diversity in Developing Countries.* Oxford University Press.

Fujita, Koichi.2009. “Agricultural Labourers in Myanmar during the Economic Transition: Views from the Study of Selected Villages” in Fujita, Mieno and Okamoto eds. *The Economic Transition in Myanmar after 1988: Market Economy versus State Control*. Singapore; NUS Press in association with Kyoto University Press:246-280.

Hart, G. 1994. “The Dynamics of Diversification in an Asian Rice Region” in Koppel, Bruce, John Hawkins and William James eds. *Development or deterioration?*: *Work in Rural Asia* Boulder: Lyinne Reinner:47-71.

Nang Mya Kay Khaing and Fujita Koichi. 2009. “Urban Informal Sector Laboures in Yangon” in Fujita, Mieno and Okamoto eds. *The Economic Transition in Myanmar after 1988: Market Economy versus State Control*. Singapore; NUS Press in association with Kyoto University Press: 281-306.

Okamoto, Ikuko. 2008a. *Economic Disparity in Rural Myanmar: Transformation under Market Liberalization.* Singapore: National University of Singapore Press.

-----2008b “The Shrimp Export Boom and Small-Scale Fishermen in Myanmar” *IDE Discussion Paper* No.135. March 2008.

Takahashi, Akio. 1997. “Intra-Rural Household Movement and Occupation in Myanmar.” *Asian Economy*. Vol.38No.11:2-24. (in Japanese).

---------- 2000.*Myanmar’s Village Economy in Transition: Peasant’ and Non-Peasant’ Lives under the Market-Oriented Economy*. Tokyo: University Tokyo Press. (in Japanese).

----- 2007. “Swiddens, Rice Terraces, and Malay Connections:Resource Use and Socio-economic Strata in the Chin Hills, Myanmar” *Southeast Asian Studies*. 45（3）:404-427. (in Japanese).

Table 1. Number of Households （2006）

Village Tract	M Village Tract		S Village Tract				
Village Tract	**J**	M	**S**	N	I	K	C
Number of Households	**1975**	440	**564**	327	70	98	84

Source: Village Peace and Development Council.

Table 2. Number of Samples

Village	J	S	Total
Number of Samples	60	47	107
Short Term	34	29	63
Long Term	26	18	44

Source: Author's Survey.

Table 3. Distribution of Origin of Migrating Crewmen

	Origin	Village J	Village S	Total
Northern Rakhine	Pon Na Kyin	13	11	24
	Kyaukto	11	4	15
	Ra The Daung	5	10	15
	Min Bya	5	3	8
	Myauk U	3	4	7
	Bu Thi Daung	1	4	5
	Sittwe	2	3	5
	Mye Bon	2	1	3
	Maung daw	2	0	2
	Pauk Taw	2	0	2
Central Rakhine	Kyauk Pyu	3	0	3
	Man Aung	2	1	3
	Ram Bye	2	0	2
Southern Rakhine	Taungouk	4	0	4
	Thandwe	1	1	2
	Gwa	1	0	1
Ayeyarawwady	Athouk	1	4	5
	Kyaiklat	0	1	1
Total		60	47	107

Source: Author's Survey.

Table 4. Patterns of Migration (Number of Samples)

	Total	Short Term	Long Term
Single Migration	57	48	9
Migration of Part of the Household	8	6	2
Migration of All Household Members	42	9	33
Total	107	63	44

Source: Author's Survey.

Table 5. Main Household Occupation before Migration as a Fishing Crew

	Number of Households
Self-Employed Agriculture	34
Agricultural Labour	38
Fishing	9
Non-Agriculture/Fishing Labour	6
Petty Trade	6
Public Servant	5
Carpenter/Plumber	3
Transportation	2
Other	3
Unknown	1
Total	107

Source: Author's Survey.

Table 6. Acreage Held by Farming Households

	Number of Household
Under 5 acres	12
5acres-10 acres	13
10 acres- 15 acres	3
Over 15 acres	6
Total	34

Note: The acreage held by parent households was taken for 3 households.

Source: Author's Survey.

Table 7. Activities Engaged in by Crewmen at their Home Village in the Dry Season

Agricultural Labour	25
Other Non-Agricultural Labour	24
Assistance to Parent"s Farm	15
Assistance to Fishing	7
Traditional Perfoming Art	2
Student	6
Nothing	7
Fishing	9
Driver	7
Petty Trading	5
Total	107

Source: Author's Survey.

Table 8. Planned Usage for Crewman Earnings

	Plaaned Usage	Total	Main Occupation of Household					Type of Migration	
			Self-employed Agriculture	Agricultural Wage Labour	Fishing	Non-farming	Unknown	Long-term	Short-term
Capital Accumulation Type	Purchase of Farmland	31	7	19	1	4	0	12	19
	Purchase of Livestock	5	2	1	0	2	0	1	4
	Initial Funds for Petty Trading	21	6	6	1	8	0	8	13
63	Purchase of Saika	1	0	1	0	0	0	0	1
	Initial Funds for Carpentry	1	0	0	0	1	0	1	0
	Initial Funds for Saw Mill	1	0	0	1	0	0	1	0
	Savings	3	0	0	0	3	0	1	2
	Working Capital for Agriculture	10	10	0	0	0	0	2	8
Subsitaince Type	Working Capital for Fishery	20	6	4	3	7	0	13	7
	Consumption	8	1	4	2	0	1	2	6
41	Repair and Construction of House	2	0	2	0	0	0	0	2
	Education & Medication	1	0	1	0	0	0	1	0
Other	To be a Buddhist novice	1	1	0	0	0	0	0	1
3	Wish to Engage in Other Job	1	0	0	1	0	0	1	0
	Unknown	1	1	0	0	0	0	1	0
	Grand Total	107	34	38	9	25	1	44	63

Note: He wanted to engage some work other than the shrimp farming, which his father does.
Source: Author's Survey.

Table 9. Purpose of Remittance

Purpose of Remittance	Number of Samples	The Original Purpose of Migration								
		Purchase of Farmland	Working Capital for Agriculture	Purchase of Livestocks	Working Capital for Fishery	Initial Fund for Petty Trading	Initial Fund for Carpentary	Consumption	Repair of House	Unknown
Consumption	21	6	2	2	3	5	1	1	1	0
Repair of House	1	0	0	0	0	1	0	0	0	0
Medication	1	0	0	0	0	0	0	1	0	0
Saving	1	0	0	0	0	1	0	0	0	0
Unknown	1	0	0	0	0	0	0	0	0	1

Source: Author's Survey.

Table 10. Distribution of Household Income Excluding Crewman Earnings

Household Income excluding Crew Income（Kyat）	Total (Sample)	Purpose of Migration			Contribution of Anchovy Crewman Earnings to Total Household Income (%)	Contribution of Total Crewman Earnings to Total Household Income (%)
		Capital Accumulation	Subsitence	Other		
Under 100,000	14	7	7	0	56.6	94.3
100,000-500,000	41	26	14	1	51.4	57.4
500,000-1,000,000	29	18	11	0	34.4	36.6
1,000,000-5,000,000	19	11	7	1	17.6	23.3
5,000,000-	4	1	2	1	5.2	9.4
Total Number of Samples	107	63	41	3		

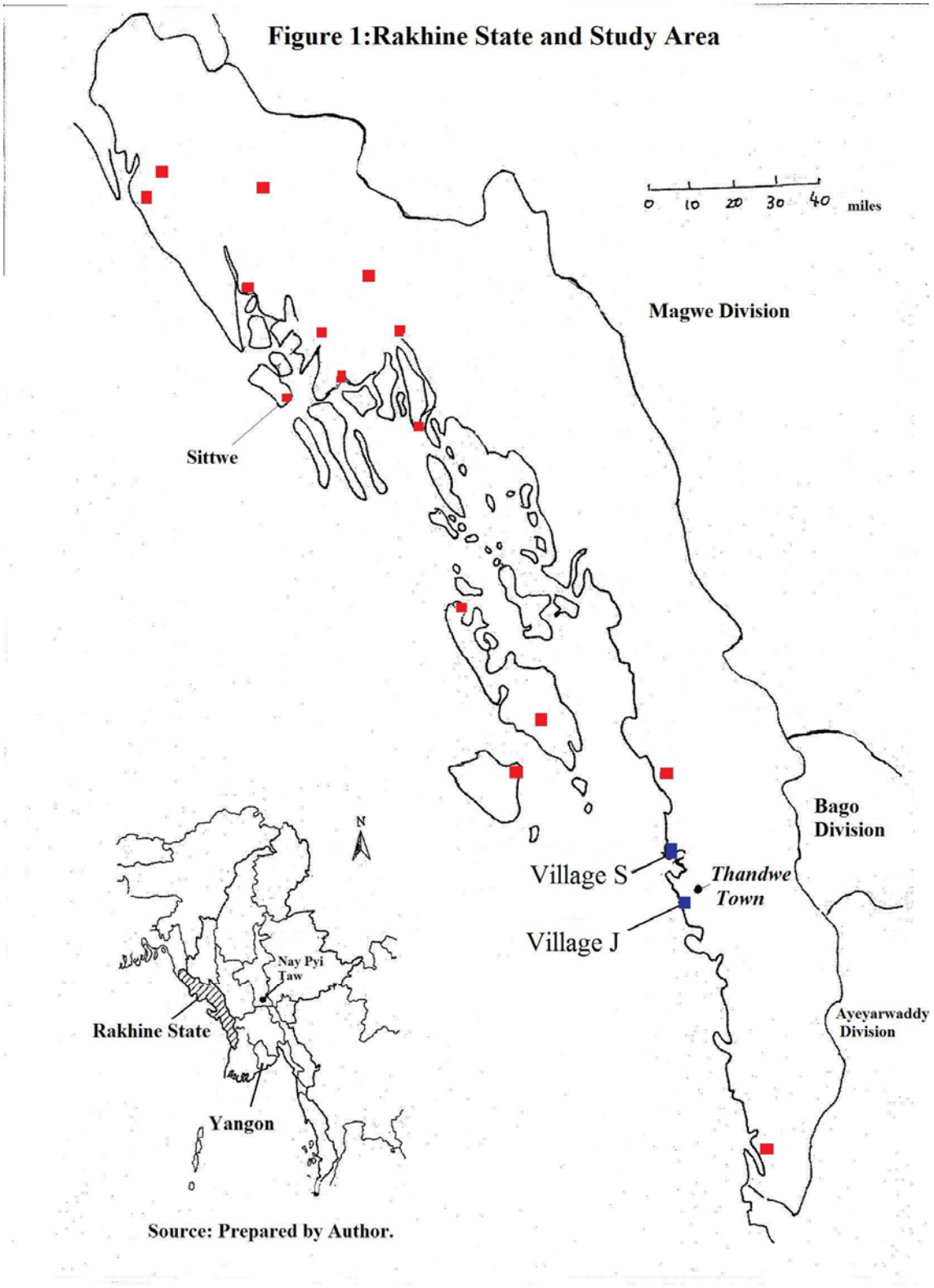
Source: Author's Survey.

Table 11. Earned Income of Crewmen before Migration in the Dry Season

Household Income Excluding Crew Income	No Job	Under 200,000	200,000-350,000	350,000-	Total
Under 100,000	1	3	2	0	6
100,000-500,000	4	13	7	4	28
500,000-1,000,000	7	10	3	1	21
1,000,000-5,000,000	9	2	2	1	14
5,000,000-	3	0	0	1	4
Total Number of Samples	24	28	14	7	73

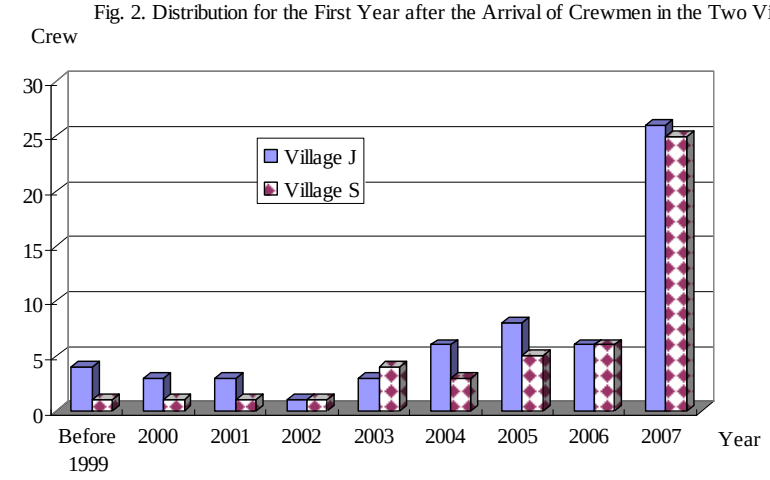
Source: Author's Survey.

Figure 1:Rakhine State and Study Area



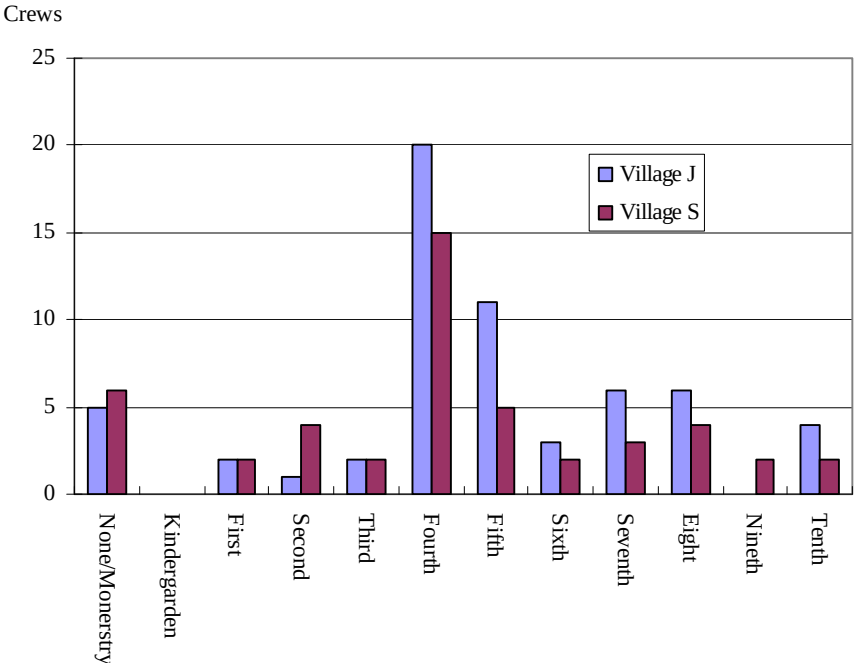
Source: Prepared by Author.

Fig. 2. Distribution for the First Year after the Arrival of Crewmen in the Two Villages



Source: Author's Survey.

Fig. 3. Educational Level of Migrating Crewmen (Completed Years)



Note: In Myanmar' s education system, primary school is from kindergarden (to fourth grade, middle school is from fifth to seventh grade and high school is from eighth to tenth grade.
Source: Author's Survey.

～Previous IDE Discussion Papers ～

No.	Author(s)	Title	
205	Takao TSUNEISHI	Border Trade and Economic Zones on the North-South Economic Corridor: Focusing on the Connecting Points between the Four Countries	2009
204	Ando ASAO Bo MENG Chao QU	Trade Coefficients and the Role of Elasticity in a Spatial CGE Model Based on the Armington Assumption	2009
203	Toshihiro KUDO	Location Advantages and Disadvantages in Myanmar:The Case of Garment Industry	2009
202	Yasushi HAZAMA	Economic Voting and Electoral Volatility in Turkish Provinces	2009
201	Tatsuya SHIMIZU	Structural Changes in Asparagus Production and Exports from Peru	2009
200	Takeshi INOUE, Shigeyuki HAMORI	An Empirical Analysis of the Monetary Policy Reaction Function in India	2009
199	Yuko TSUJITA	Deprivation of Education in Urban Areas: A Basic Profile of Slum Children in Delhi, India	2009
198	Kaoru MURAKAMI	Constructing Female Subject: Narratives on Family and Life Security among Urban Poor in Turkey	2009
197	Akiko YANAI	Normative Influences of "Special and Differential Treatment" on North-South RTAs	2009
196	Hisaya ODA	Pakistani Migration to the United States: An Economic Perspective	2009
195	Yukihito SATO	Perfecting the Catching-up: The Case of Taiwan’s Motorcycle Industry	2009
194	Natsuko OKA	Ethnicity and Elections under Authoritarianism: The Case of Kazakhstan	2009
193	Futaba ISHIZUKA	Vietnamese Local State-owned Enterprises (SOEs) at the Crossroads: Implications of SOE Restructuring at the Local Level	2009
192	Yasushi HAZAMA	Constitutional Review and Democratic Consolidation: A Literature Review	2009
191	Hisao YOSHINO	Technology Choice in the IT Industry and Changes of the Trade Structure	2009
190	Toshikazu YAMADA	In Memory of Dr. Ali Al-Gritly (1913-1982): His Views on Egypt’s Experience with Socialism	2009
189	Kanako YAMAOKA	The Feasibility of Cuban Market Economy: A Comparison with Vietnam	2009
188	Tomohiro MACHIKITA, Yasushi UEKI	Linked versus Non-linked Firms in Innovation: The Effects of Economies of Network in Agglomeration in East Asia	2009
187	Hisao YOSHINO	Financial Policies and Dynamic Game Simulation in Poland and Hungary	2009
186	Kazushi TAKAHASHI	Is South Sulawesi a Center of Growth in Eastern Indonesia?: Japanese ODA Strategy Revisited	2009
185	Bo MENG, Satoshi INOMATA	Production Networks and Spatial Economic Interdependence: An International Input-Output Analysis of the Asia-Pacific Region	2009
184	Bo MENG, Nobuhiro OKAMOTO, Yoshiharu TSUKAMOTO, Chao QU	Input-Output Based Economic Impact Evaluation System for Small City Development: A Case Study on Saemangeum's Flux City Design	2009

No.	Author(s)	Title	
183	Nobuhiko FUWA, Seiro ITO, Kensuke KUBO, Takashi KUROSAKI, and Yasuyuki SAWADA	How Does Credit Access Affect Children's Time Allocation in a Developing Country? A Case Study from Rural India	2009
182	Moriki OHARA Yuri SATO	Asian Industrial Development from the Perspective of the Motorcycle Industry	2008
181	Takeshi KAWANAKA	Political Conditions for Fair Elections	2008
180	Takeshi INOUE	The Causal Relationships in Mean and Variance between Stock Returns and Foreign Institutional Investment in India	2008
179	Naoko AMAKAWA	Reconstruction and Development of Rural Cambodia--From Krom Samakki to Globalization--	2008
178	Kazunobu HAYAKAWA, Toshiyuki MATSUURA	Pitfalls of Location Choice Analysis: The Finished Goods Producer versus the Intermediate Goods Producer	2008
177	Yoko ASUYAMA	The Contribution of Supply and Demand Shifts to Earnings Inequality in Urban China	2008
176	Yoko ASUYAMA	Changes in the Causes of Earnings Inequality in Urban China from 1988 to 2002	2008
175	Satoshi INOMATA	A New Measurement for International Fragmentation of the Production Process: An International Input-Output Approach	2008
174	Mayumi MURAYAMA, Nobuko YOKOTA	Revisiting Labour and Gender Issues in Export Processing Zones: The Cases of South Korea, Bangladesh and India	2008
173	Masahiro KODAMA	The Impact of Unstable Aids on Consumption Volatility in Developing Countires	2008
172	Hiroshi OIKAWA	Empirical Global Value Chain Analysis in Electronics and Automobile Industries: An Application of Asian International Input-Output Tables	2008
171	Eiichi YOSHIDA	Transformation of Woodworking and Furniture Industrial Districts in Kampala, Uganda: Dichotomous Development of SME Cluster and Large Firm Sector	2008
170	Azusa HARASHIMA	The Impact of Tobacco Production Liberalization on Smallholders in Malawi	2008
169	Zaid Bakht, Md. Salimullah, Tatsufumi Yamagata, and Mohammad Yunus	Competitiveness of the Knitwear Industry in Bangladesh: A Study of Industrial Development amid Global Competition	2008
168	Hitoshi OTA	Indian IT Software Engineers in Japan: A Preliminary Analysis	2008
167	Hiroshi Oikawa	TNCs in Perplexity over How to Meet Local Suppliers: The Case of Philippine Export Processing Zone	2008
166	Takeshi INOUE, Shigeyuki HAMORI	An Empirical Analysis of the Money Demand Function in India	2008
165	Mayumi MURAYAMA	Re-Examining ‘Difference’ and ‘Development’: A Note on Broadening the Field of Gender and Development in Japan	2008
164	Jose Luis CORDEIRO	Constitutions aroumd the World: A View from Latin America	2008
163	Takahiro FUKUNISHI	Clothing Export from Sub-Saharan Africa: Impact on Poverty and Potential for Growth	2008
162	Koichi USAMI	Re-thinking Argentina's Labour and Social Security Reform in the 1990s: Agreement on Competitive Corporatism	2008
161	Mai FUJITA	Value Chain Dynamics and the Growth of Local Firms: The Case of Motorcycle Industry in Vietnam	2008
160	Kazunobu HAYAKAWA, Kuo-I CHANG	Border Barriers in Agricultural Trade and the Impact of Their Elimination: Evidence from East Asia	2008

No.	Author(s)	Title	
159	Satoru KUMAGAI, Toshitaka GOKAN, Ikumo ISONO, Souknilanh KEOLA	The IDE Geographical Simulation Model: Predicting Long-Term Effects of Infrastructure Development Projectso	2008
158	Satoru KUMAGAI	A Journey through the Secret History of the Flying Geese Model	2008
157	Satoru KUMAGAI	A Mathematical Representation of "Excitement" in Games: A Contribution to the Theory of Game Systems	2008
156	Kazunobu HAYAKAWA, Fukunari KIMURA	The Effect of Exchange Rate Volatility on International Trade: The Implication for Production Networks in East Asia	2008
155	Kazunobu HAYAKAWA	The Choice of Transport Mode: Evidence from Japanese Exports to East Asia	2008
154	Jose Luis CORDEIRO	Monetary Systems in Developing Countries: An Unorthodox View	2008
153	Takao TSUNEISHI	Development of Border Economic Zones in Thailand: Expansion of Border Trade and Formation of Border Economic Zones	2008
152	Nguyen Binh Giang	Improving the Foreign Direct Investment Capacity of the Mountainous Provinces in Viet Nam	2008
151	Syviengxay Oraboune	Infrastructure (Rural Road) Development and Poverty Alleviation in Lao PDR	2008
150	Chap Moly	Infrastructure Development of Railway in Cambodia: A Long Term Strategy	2008
149	Thandar Khine	Foreign Direct Investment Relations between Myanmar and ASEAN	2008
148	Aung Kyaw	Financing Small and Midium Enterprises in Myanmar	2008
147	Toshihiro KUDO	Myanmar Sugar SMEs: History, Technology, Location and Government Policy	2008
146	Momoko KAWAKAMI	Exploiting the Modularity of Value Chains: Inter-firm Dynamics of the Taiwanese Notebook PC Industry	2008
145	Toshikazu YAMADA	Sustainable Development and Poverty Reduction under Mubarak's Program	2008
144	Miki HAMADA	Bank Borrowing and Financing Medium-sized Firms in Indonesia	2008
143	Yoko IWASAKI	Methodological Application of Modern Historical Science to 'Qualitative Research'	2008
142	Masahiro KODAMA	Monetary Policy Effects in Developing Countries with Minimum Wages	2008
141	Yasushi HAZAMA	The Political Economy of Growth: A Review	2008
140	Kumiko MAKINO	The Changing Nature of Employment and the Reform of Labor and Social Security Legislation in Post-Apartheid South Africa	2008
139	Hisao YOSHINO	Technology Choice, Change of Trade Structure, and A Case of Hungarian Economy	2008
138	Shigeki HIGASHI	The Policy Making Process in FTA Negotiations: A Case Study of Japanese Bilateral EPAs	2008
137	Arup MITRA and Mayumi MURAYAMA	Rural to Urban Migration: A District Level Analysis for India	2008
136	Nicolaus Herman SHOMBE	Causality relationship between Total Export and Agricultural GDP and Manufacturing GDP case of Tanzania	2008
135	Ikuko OKAMOTO	The Shrimp Export Boom and Small-Scale Fishermen in Myanmar	2008
134	Chibwe CHISALA	Unlocking the Potential of Zambian Micro, Small and Medium Enterprises "learning from the international best practices - the Southeast Asian Experience"	2008